

Partners

Symbiosis--Parasitism,
mutualism,
commensalism, etc.!



Symbiosis is a close interaction or relationship between two different species. There are 6 kinds of relationships.

Commensalism –one species benefits; the other is unaffected.

Mutualism – both benefit.

Parasitism – one species benefits; the other is harmed.

Competition – neither benefits.

Predation – one species benefits ; the other dies,

Neutralism – both unaffected.



Interaction fingerplay



I'm a little ball moss
perching on a tree,
(tight fist on finger)

Not hurting anything
as happy as can be.
(shaking finger, no,
no)

Mistletoe's a different
story, (open hand
wiggling fingers)

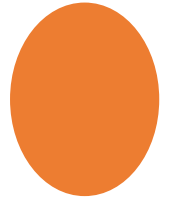
Destructive as you
see! (hands by face,
shocked expression)

The Yucca moth and *Yucca rupicola*—obligate mutualism <https://txmn.org/alamo/area-resources/natural-areas-and-linear-creekways-guide/yucca-yucca-moth/>

I am the Yucca moth,
Tegeticula yuccasella,
And I only want to thrive.

I need the *Yucca*
rupicola,
So that both of us
survive!

Sing to *You Are My Sunshine*



Together

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Living things interact with each other in different ways.

Symbiosis

When two living things interact, we call it symbiosis.

Sometimes both benefit.

Sometimes one benefits at the expense of the other.

Sometimes neither particularly benefits.

Mutualism



The Yucca moth and *Yucca rupicola* are an example of obligate mutualism. They need each other for their life cycles.

Commensalism

Ball moss is an example of commensalism. It rests on the branches but does not affect the tree.





Parasitism

Cochineal is an example of parasitism. It feeds on the cactus.

Other symbiotic relationships are:

Neutralism

Competition

Predation

Neutralism,
competition,
predation

Be a symbiosis detective!

Can you find ball moss and cochineal in the park?
And here are fun things to do:

Pour some water on ball moss and watch it turn green.

Squeeze some cochineal and discover the red dye.



Cut out the mistletoes and cover up the tree!



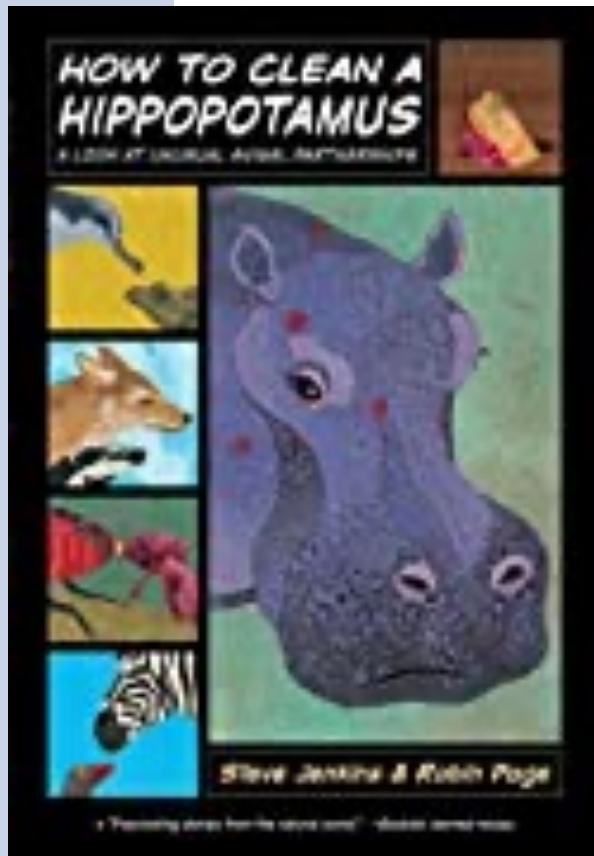




Be a symbiosis chef!



Slice a green pepper to make yucca fronds.
Place a spoonful of cream cheese for the flowers and add mini pretzels for the Yucca moths!



Symbiosis and....

....animal relationships!